

1. Development of the New Rock Mass Characterization System Using the Vibration Response Data of Roadheader

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In the mountain tunnel construction, it is quite important to combine the optimum supporting members based on the appropriate rock mass characterization at every face. However, there were problems, such as lack of objectivity and lack of generalization on a characterization technology, since the rock mass characterization has been carried out until now by depending on the specific experience of each engineer.

Therefore, using the boom vibration data of roadheader, the new characterization system was developed, which could quantitatively and objectively evaluate rock mass conditions without interrupting the face work. In this paper, the outline and application result of this system are presented.

Key words : roadheader, rock mass characterization, boom vibration